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Piezoelectric drive, especially piezoelectric motor
for producing continuous or stepwise movements,
friction element for a piezoelectric drive for
transmission of forces between stator and rotor, as well as
circuit arrangement for operating a piezoelectric
drive, especially a piezoelectric motor

Specification

1 The invention relates to a piezoelectric drive, especially a
2 piezoelectric motor for producing continuous or stepwise
3 movements, comprising a rotor provided with a friction surface, a
4 drive element in the form of a piezoelectric exciter that can be
5 brought into contact with this surface, the exciter comprising a
6 monolithic, plate-like, piezoelectric transducer provided with
7 substantially rectangular electrode faces, an outer fastening, a
8 friction element disposed on one of the end faces of the
9 piezoelectric transducer, as well as a holding device for the
10 piezoelectric transducer and means for pressing the friction
11 element elastically against the friction surface of the rotor.
12 The invention also relates to a friction element for a
13 piezoelectric drive for transmitting forces between stator and
14 rotor as well as to a circuit arrangement for operating a
15 piezoelectric drive, especially a piezoelectric motor, according
16 to the preamble of claims 1, 6 and 11.

Piezoelectric motors which comprise a stator and rotor and
wherein the stator is provided with at least one piezoelectric
oscillator that can be pressed frictionally against the surface
of the rotor in drive direction are known. The oscillator
comprises in known manner a piezo element provided on its
parallel outside faces with electrodes, which are connected to an
a.c. voltage source. An example of the prior art can be found in
German Patent 2530045 C2.